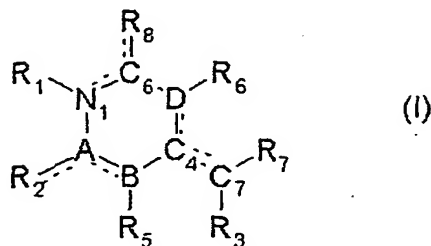


CLAIMS

1. A compound corresponding to general formula (I)



5

in which:

A represents C or N,

B and D, which may be identical or different, are
chosen from N or C, with the proviso that A and B do
10 not simultaneously represent a nitrogen atom,

R₁ represents

- either a hydrogen atom,
- or a (C₁-C₁₂)alkyl, (C₃-C₆)cycloalkyl, (C₆-C₁₈)aryl,
15 (C₆-C₁₈)aryl(C₁-C₄)alkyl, (C₁-C₁₂)alkyl(C₆-C₁₈)aryl,
(C₂-C₈)alkenyl, (C₂-C₈)alkynyl, (C₁-C₈)alkoxy or
hydroxyl group,
- or an aromatic or nonaromatic (C₅-C₁₈)heterocycle
containing from 1 to 3 hetero atoms and being
attached directly to the nitrogen atom in the
20 1-position by means of a single bond or by means
of a (C₁-C₆)alkyl, (C₂-C₆)alkenyl or (C₂-C₆)alkynyl
group,
- or a group NR'R'' or NHCOR'R'', R' and R'',
independently of one another, being chosen from a
25 hydrogen atom, (C₁-C₆)alkyl, (C₃-C₆)cycloalkyl and
(C₆-C₁₂)aryl groups, and aromatic or nonaromatic
(C₅-C₁₂)heterocycles containing from 1 to 3 hetero
atoms;

R₂ and R₃, which may be identical or different, each
30 represent

- either a hydrogen atom,
- or a halogen atom,
- or a group: (C₁-C₆)alkoxy, (C₁-C₁₀)alkyl, (C₁-C₆)-

alkylCOOH, (C₁-C₆)alkylCOONa, perfluoro(C₁-C₆)-alkyl, (C₃-C₆)cycloalkyl, acyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, (C₆-C₁₈)aryl, (C₆-C₁₈)arylCOOH, (C₆-C₁₈)arylCOONa, (C₆-C₁₈)aryl(C₁-C₄)alkyl, (C₁-C₆)-alkyl(C₆-C₁₈)aryl, (C₅-C₁₈)heteroaryl, (C₁-C₆)alkyl-(C₅-C₁₈)heteroaryl, (C₂-C₆)alkenyl(C₅-C₁₈)heteroaryl, (C₂-C₆)alkynyl(C₅-C₁₈)heteroaryl, CH(OH)(C₆-C₁₈)aryl, CO(C₆-C₁₈)aryl, (CH₂)_nCONH-(CH₂)_m-(C₆-C₁₈)aryl, (CH₂)_nSO₂NH-(CH₂)_m-(C₆-C₁₈)aryl or (CH₂)_nCONH-CH(COOH)-(CH₂)_p-(C₆-C₁₈)aryl with n = 1 to 4, m = 0 to 3 and p = 0 to 2, in which one or more groups -CH₂- can be optionally replaced with -O-, -S-, -S(O)-, -S(O)₂- or -NH-, and can be optionally substituted with one or more radicals chosen from the following radicals: (C₁-C₆)alkyl, hydroxyl, oxo, (C₆-C₁₈)aryl(C₁-C₈)alkyl, (C₆-C₁₈)aryl, halogen, cyano, phosphate, alkylphosphate, nitro, alkoxy, (C₅-C₁₈)heteroaryl, (C₅-C₁₈)heteroaryl(C₁-C₆)alkyl, COOH, CONR_xR_y, NR_xCONHR_y, OR_x, SR_x, SOR_x, SO₂R_x, COR_x, COOR_x, NR_xSO₂R_y or NR_xR_y in which (i) R_x and R_y, independently of one another, are chosen from a hydrogen atom and the following groups: (C₁-C₆)-alkyl, (C₃-C₆)cycloalkyl, (C₆-C₁₈)aryl, (C₆-C₁₈)aryl-(C₁-C₄)alkyl, (C₁-C₁₂)alkyl(C₆-C₁₈)aryl, (C₃-C₆)-cycloalkyl(C₆-C₁₂)aryl, (C₁-C₆)alkoxy(C₁-C₆)alkyl, (C₅-C₁₂)heteroaryl containing 1 to 3 hetero atoms, OR', NR'R'' and NHCOR'R'', R' and R'', independently of one another, being chosen from a hydrogen atom, (C₁-C₆)alkyl, (C₃-C₆)cycloalkyl and (C₆-C₁₂)aryl groups, and aromatic or nonaromatic (C₅-C₁₂)heterocycles containing 1 to 3 hetero atoms, or (ii) R_x and R_y together form a linear or branched hydrocarbon-based chain having from 2 to 6 carbon atoms, optionally containing one or more double bonds and/or optionally interrupted with an oxygen, sulfur or nitrogen atom,

- or a nitro, cyano, OR_x, SR_x, SOR_x, SO₂R_x, COR_x, CONR_xR_y, COOR_x, NR_xCOR_y, NR_xSO₂R_y or NR_xR_y group in

which R_x and R_y are as defined above,

- it being understood that, in the definition of the groups R_2 and R_3 , the "aryl" groups can be replaced with aromatic or nonaromatic C_4 - C_{10} "heterocycles" containing from 1 to 3 hetero atoms;

R_5 represents

- either a hydrogen atom,
- or a group: (C_1-C_6) alkyl, (C_3-C_6) cycloalkyl, (C_6-C_{12}) aryl, or (C_5-C_{12}) heteroaryl containing 1 to 3 hetero atoms;

R_6 and R_7 form, together with the atoms which carry them, a 5- or 6-membered ring which may contain another hetero atom chosen from the group consisting of N, O and S, and in which

- 15 if the bond between N_1 and C_6 is a single bond, then the bond between C_6 and R_8 is a double bond and $R_8 = X$, where X represents either an oxygen or sulfur atom, or a group NR_x in which R_x is as defined above,

- 20 if the bond between N_1 and C_6 is a double bond, then the bond between C_6 and R_8 is a single bond and $R_8 = Y$ where Y represents either a halogen atom, or a (C_1-C_6) alkyl, (C_2-C_6) alkenyl, (C_2-C_6) alkynyl, (C_1-C_6) alkoxy, (C_3-C_6) cycloalkyl, OR_x , SR_x , SOR_x , SO_2R_x , NR_xCOR_y , $NR_xSO_2R_y$ or NR_xR_y group in which R_x and R_y are as defined above and

- 25 R_1 is not present,

if the bond between A and B is a single bond, then the bond between A and R_2 is a double bond and $R_2 = X$ where X is as defined above, and

- 30 if the bond between A and B is a double bond, then the bond between A and R_2 is a single bond, R_2 is as defined above and R_5 is not present,

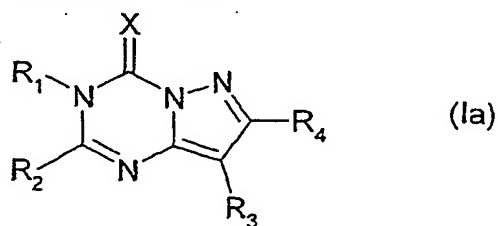
if the bond between C_4 and D is a single bond, then the bond between C_4 and C_7 is a double bond,

- 35 if the bond between C_4 and D is a double bond, then the bond between C_4 and C_7 is a single bond, and D is a carbon atom, or else D is a nitrogen atom and R_6 is not present,

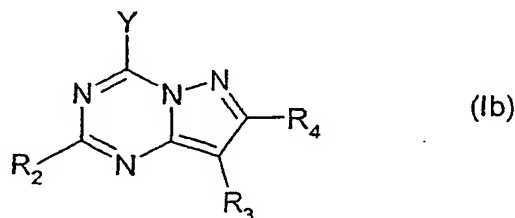
and it being understood that, when, in formula (I), the

fused 5-membered ring is an imidazole, A is a carbon atom and B is a nitrogen atom, then C₄ can be replaced with a nitrogen atom so that the 6-membered ring thus formed is a 1,2,4-triazine and the bicycle thus formed is an imidazotriazine,

X, Y, R₂ and R₃ having the same meaning as above, its tautomeric forms, its isomers, diastereoisomers and enantiomers, its prodrugs, its bioprecursors and its pharmaceutically acceptable base or acid addition salts, with the proviso that, when the compound corresponds to formula (Ia),



or (Ib)



15 then

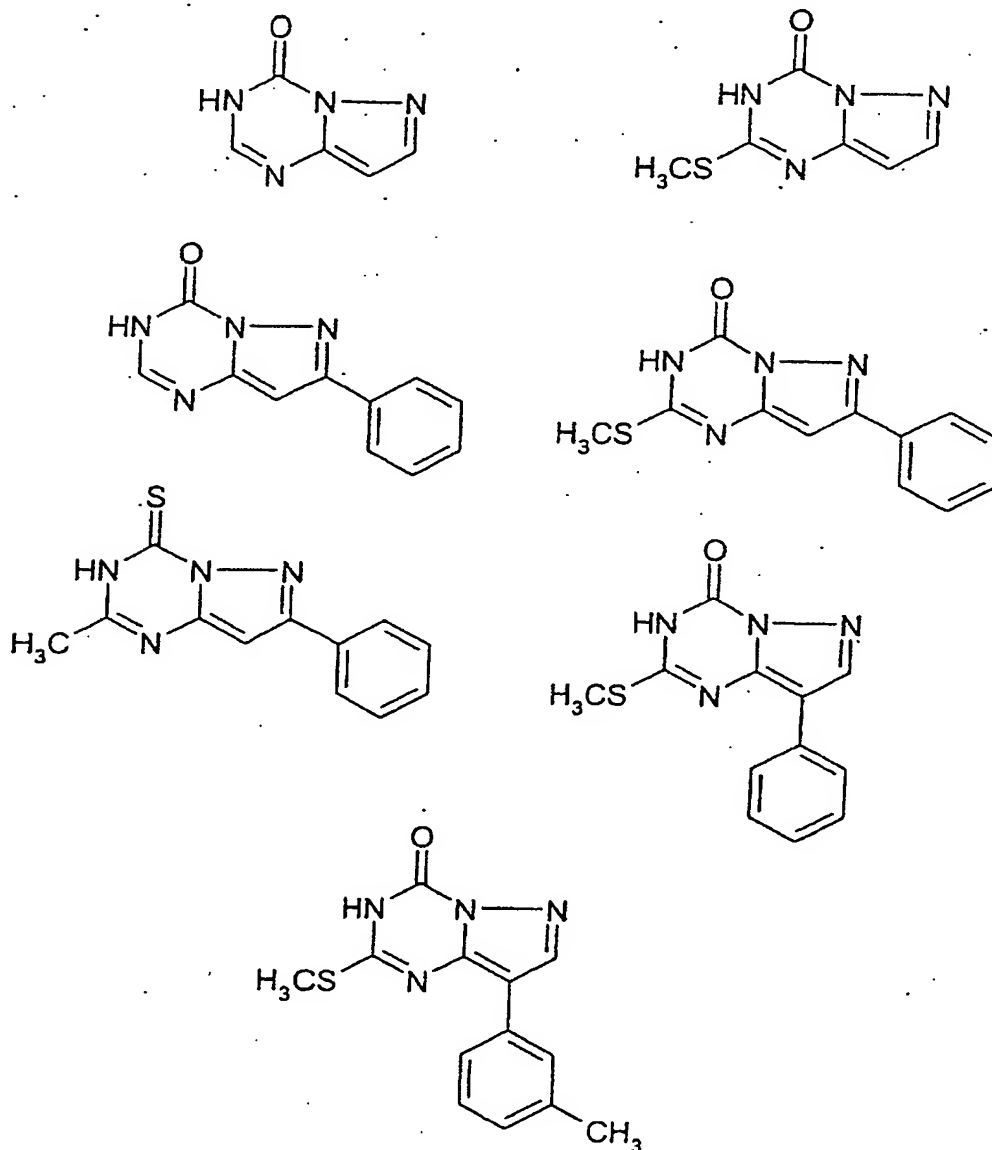
- when Y, in formula (Ib), represents OR_x, then R_x is necessarily different from aryl and aralkyl;
- when simultaneously, in formula (Ib), Y represents NR_xR_y and R_x represents H, then R_y is necessarily different from aryl and aralkyl;
- when Y, in formula (Ib), represents a group NR_xR_y in which at least one of the groups R_x or R_y is chosen from optionally substituted phenyl or pyridyl groups, then R₃ is different from a (C₁-C₁₀)alkyl, (C₂-C₁₀)alkenyl, (C₂-C₁₀)alkynyl, (C₃-C₈)cycloalkyl and (C₃-C₆)cycloalkyl(C₁-C₄)alkyl group, it being possible for the latter to be optionally substituted;
- when R₃, in formula (Ib), represents an optionally

- substituted phenyl or pyridyl group, then Y is different from: $\text{NHCH}(\text{CH}_2\text{CH}_2\text{OMe})(\text{CH}_2\text{OMe})$, $\text{NHCH}(\text{Et})_2$, 2-ethylpiperid-1-yl, cyclobutylamino, $\text{N}(\text{Me})\text{CH}_2\text{CH}=\text{CH}_2$, $\text{N}(\text{Et})\text{CH}_2\text{CH}=\text{CH}_2$, $\text{N}(\text{Me})\text{CH}_2\text{cPr}$, $\text{N}(\text{Et})\text{CH}_2\text{cPr}$, $\text{N}(\text{Pr})\text{CH}_2\text{cPr}$, $\text{N}(\text{Me})\text{Pr}$, $\text{N}(\text{Me})\text{Et}$, $\text{N}(\text{Me})\text{Bu}$, $\text{N}(\text{Me})\text{propargyl}$, $\text{N}(\text{Et})\text{propargyl}$, $\text{NHCH}(\text{CH}_3)\text{CH}(\text{CH}_3)\text{CH}_3$, $\text{N}(\text{CH}_2\text{CH}_2\text{OMe})\text{CH}_2\text{CH}=\text{CH}_2$, $\text{N}(\text{CH}_2\text{CH}_2\text{OMe})\text{Me}$, $\text{N}(\text{CH}_2\text{CH}_2\text{OMe})\text{Et}$, $\text{N}(\text{CH}_2\text{CH}_2\text{OMe})\text{Pr}$, $\text{N}(\text{CH}_2\text{CH}_2\text{OMe})\text{CH}_2\text{cPr}$, $\text{NHCH}(\text{CH}_3)\text{CH}_2\text{CH}_3$, $\text{NHCH}(\text{cPr})_2$, $\text{N}(\text{CH}_2\text{CH}_2\text{OMe})_2$, $\text{N}(\text{Et})_2$ and cyclobutylamino;
- when R_3 , in formula (Ib), represents a phenyl, naphthyl, pyridyl, pyrimidyl, triazinyl, furanyl, thienyl, benzothienyl, benzofuranyl, 2,3-dihydrobenzofuranyl, 2,3-dihydrobenzothienyl, indanyl, 1,2-benzopyranyl, 3,4-dihydro-1,2-benzopyranyl or tetralinyl group, then R_1 in formula (Ia) is different from H;
 - when simultaneously, in formula (Ib), R_3 represents a heterocycle directly attached at the 8-position of the pyrazolotriazine ring, R_2 represents alkyl or hydrogen, and Y represents a group NR_xR_y , R_x being chosen from a hydrogen atom or an alkyl group, then R_y is different from H or from an alkyl, alkanoyl, carbamoyl or N-alkyl-carbamoyl group;
 - when NR_xR_y , in formula (Ib), represents an NH_2 group or a group $\text{NH}(\text{C}_1\text{-C}_4)\text{alkyl}$, then R_4 is different from a hydrogen atom or a $\text{C}_1\text{-C}_4$ alkyl group;
 - when simultaneously, in formula (Ib), Y represents NHCH_3 , R_2 represents CH_3 and R_4 represents a hydrogen atom, then R_3 is different from benzyl, phenyl, naphthyl, (2-naphthyl)methyl, pentyl, benzoyl, propyne, penten-1-yl, 2-furyl, 2-thienyl, 2-chlorophenyl, 3-acetylphenyl, 3-nitrophenyl, 3-trifluoromethylphenyl, 2-benzo[b]furyl, 2-benzo[b]thienyl, 2-chlorobenzoyl, 2-methylaminobenzoyl, 4-methoxybenzoyl, 3-trifluoromethylbenzoyl,

furfuryl, (3-furyl)methyl, (2-thienyl)methyl, 2-hydroxypropyl, iodo, nitro, acetylamino, benzoylamino and diethylaminocarbonyl;

- 5 - when simultaneously, in formula (Ib), Y represents NHCH₃, R₄ represents H and R₃ represents benzoyl or iodo, then R₂ is different from methyl, ethyl, *n*-propyl, *n*-butyl, thiomethyl, methoxymethyl, phenyl and 2-furyl;
- 10 - when simultaneously, in formula (Ib), Y represents NHCH₃, R₄ represents H and R₃ represents benzyl or 2-methoxybenzyl, then R₂ is different from methyl, *n*-propyl and trifluoromethyl;
- 15 - when simultaneously, in formula (Ib), Y represents a methylamino, benzylamino, pyrrolidinyl, dimethylamino or 1-piperazinyl group and R₂ represents methyl or *n*-propyl, then R₃ is different from iodo and benzoyl;
- 20 - when R₄, in formula (Ib), is a 2-furyl group, then R₃ is different from a hydrogen atom or from a (C₁-C₄)alkyl group;
- 25 - when simultaneously, in formulae (Ia) and (Ib), R₁ is a hydrogen atom with R₂ chosen from CH₃, C₂H₅ or C₆H₅, R₃ is chosen from H, C₆H₅, (m)CH₃C₆H₄, CN, COOEt, Cl, I or Br, and R₄ represents H, C₆H₅, (o)CH₃C₆H₄ or (p)CH₃OC₆H₄, then Y is different from H, OH, CH₃, C₂H₅, C₆H₅, *n*-C₃H₇, *iso*-C₃H₇, SH, SCH₃, NH(*n*-C₄H₉) or N(C₂H₅)₂ and X is different from O;
- 30 - when simultaneously, in formula (Ib), R₁ represents H, R₃ represents Br or H, and R₂ is chosen from H, CH₃ or SCH₃ with R₄ being C₆H₅ or H, then Y is different from SCH₃, NH(*n*-Pr), NH(*n*-Bu), N(Et)₂, piperidyl, OH, SH, O(*i*-Pr), CH₃, SEt, OCH₃ and O(*n*-Pr);
- 35 - when simultaneously, in formula (Ib), R₂ represents CF₃, CH₃OCH₂-, Ph, Et, *n*-Pr or CH₃, Y represents NHCH₃, N(CH₃)₂ or N(CH₃)Ph, and R₄ = H or CH₃, then R₃ is different from β-D-glycero-pento-furan-3'-ulos-1'-yl, 2'-deoxy-β-D-ribofuranosyl,

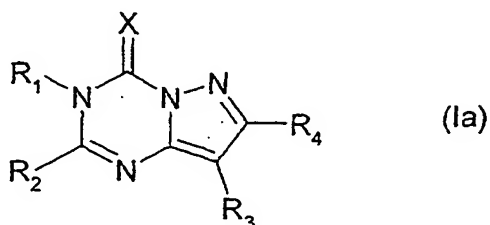
2'-deoxy-β-D-xylofuranosyl, 2'-deoxy-β-D-ribo-
 furanosyl-3',5'-bis(dibenzyl phosphate), cyclic
 benzyl 2'-deoxy-β-D-xylofuranosyl-3',5'-phosphate,
 2'-deoxy-β-D-ribofuranosyl-3',5'-bisphosphate and
 5 cyclic 2'-deoxy-β-D-xylofuranosyl-3',5'-phosphate,
 and with the proviso that the compound does not
 correspond to the following formulae:



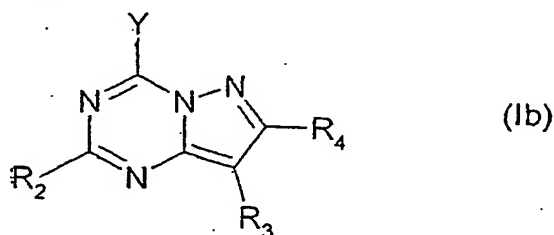
- 10 2. A compound as claimed in claim 1, corresponding to
 formula (I), characterized in that A is a carbon atom,
 and B and D are nitrogen atoms, the 6-membered hetero-
 cycle thus formed being a triazine, or A represents a

nitrogen atom and B and C represent carbon atoms, the 6-membered heterocycle thus formed being a pyridazine.

3. A compound as claimed in either one of claims 1
5 and 2, corresponding to formula (Ia),



or to formula (Ib),



10 characterized in that R₁, R₂, R₃, X and Y are as defined
in claim 1 and

R₄ represents:

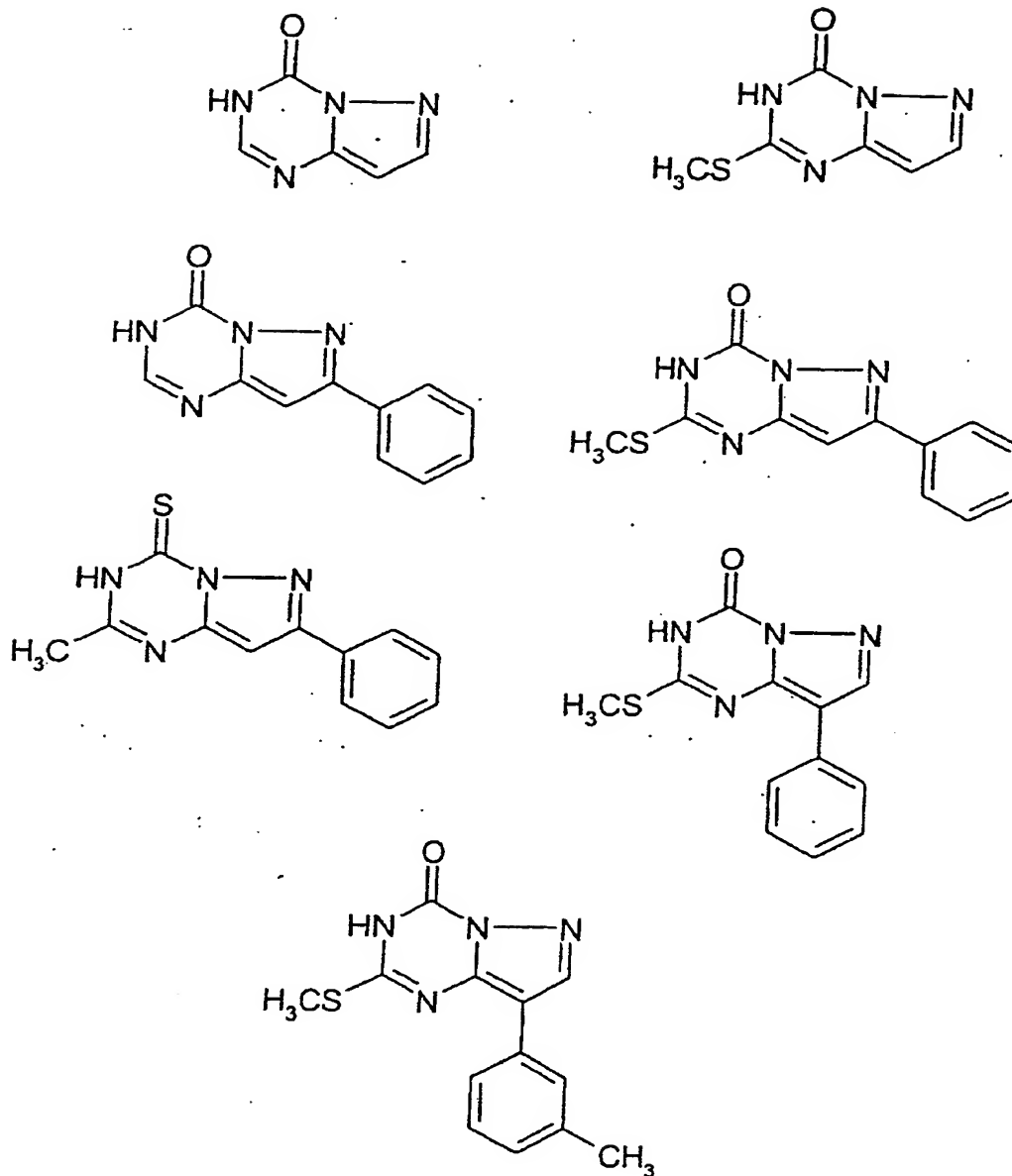
- either a hydrogen atom, a (C₁-C₁₂)alkyl,
(C₃-C₆)cycloalkyl, (C₆-C₁₈)aryl, (C₆-C₁₈)aryl-
15 (C₁-C₄)alkyl or (C₁-C₁₂)alkyl(C₆-C₁₈)aryl group, or
an aromatic or nonaromatic (C₅-C₁₈)heterocycle
containing 1 to 3 hetero atoms, in which one or
more groups -CH₂- can be optionally replaced with
-O-, -S-, -S(O)-, -S(O)₂- or -NH-, and can be
20 optionally substituted with one or more radicals
chosen from (C₁-C₆)alkyl, hydroxyl, oxo, halogen,
cyano, nitro and alkoxy radicals,
- or a group NR'R'' or NHCOR'R'', R' and R'',
independently of one another, being chosen from a
25 hydrogen atom, a (C₁-C₆)alkyl, (C₃-C₆)cycloalkyl or
(C₆-C₁₂)aryl group, and an aromatic or nonaromatic
(C₅-C₁₂)heterocycle containing from 1 to 3 hetero
atoms, it being possible for said formulae (Ia)
and (Ib) to be, with respect to one another,

tautomeric forms according to the definition of R_1 , of X and of Y, with the proviso that:

- when Y, in formula (Ib), represents OR_x , then R_x is necessarily different from aryl and aralkyl;
- 5 - when simultaneously, in formula (Ib), Y represents NR_xR_y and R_x represents H, then R_y is necessarily different from aryl and aralkyl;
- when Y, in formula (Ib), represents a group NR_xR_y in which at least one of the groups R_x or R_y is chosen from optionally substituted phenyl or pyridyl groups, then R_3 is different from a (C₁-C₁₀)alkyl, (C₂-C₁₀)alkenyl, (C₂-C₁₀)alkynyl, (C₃-C₈)cycloalkyl and (C₃-C₆)cycloalkyl(C₁-C₄)alkyl group, it being possible for the latter to be optionally substituted;
- 15 - when R_3 , in formula (Ib), represents an optionally substituted phenyl or pyridyl group, then Y is different from: NHCH(CH₂CH₂OMe)(CH₂OMe), NHCH(Et)₂, 2-ethylpiperid-1-yl, cyclobutylamino, N(Me)CH₂CH=CH₂, N(Et)CH₂CH=CH₂, N(Me)CH₂cPr, N(Et)CH₂cPr, N(Pr)CH₂cPr, N(Me)Pr, N(Me)Et, N(Me)Bu, N(Me)propargyl, N(Et)propargyl, NHCH(CH₃)CH(CH₃)CH₃, N(CH₂CH₂OMe)CH₂CH=CH₂, N(CH₂CH₂OMe)Me, N(CH₂CH₂OMe)Et, N(CH₂CH₂OMe)Pr, N(CH₂CH₂OMe)CH₂cPr, NHCH(CH₃)CH₂CH₃, NHCH(cPr)₂, N(CH₂CH₂OMe)₂, N(Et)₂ and cyclobutylamino;
- 20 - when simultaneously, in formula (Ib), Y represents a methylamino, benzylamino, pyrrolidinyl, dimethylamino or 1-piperazinyl group and R_2 represents methyl or n-propyl, then R_3 is different from iodo and benzoyl;
- 30 - when R_3 , in formula (Ib), represents a phenyl, naphthyl, pyridyl, pyrimidyl, triazinyl, furanyl, thienyl, benzothienyl, benzofuranyl, 2,3-dihydrobenzofuranyl, 2,3-dihydrobenzothienyl, indanyl, 1,2-benzopyranyl, 3,4-dihydro-1,2-benzopyranyl or tetralinyl group, then R_1 in formula (Ia) is different from H;
- 35

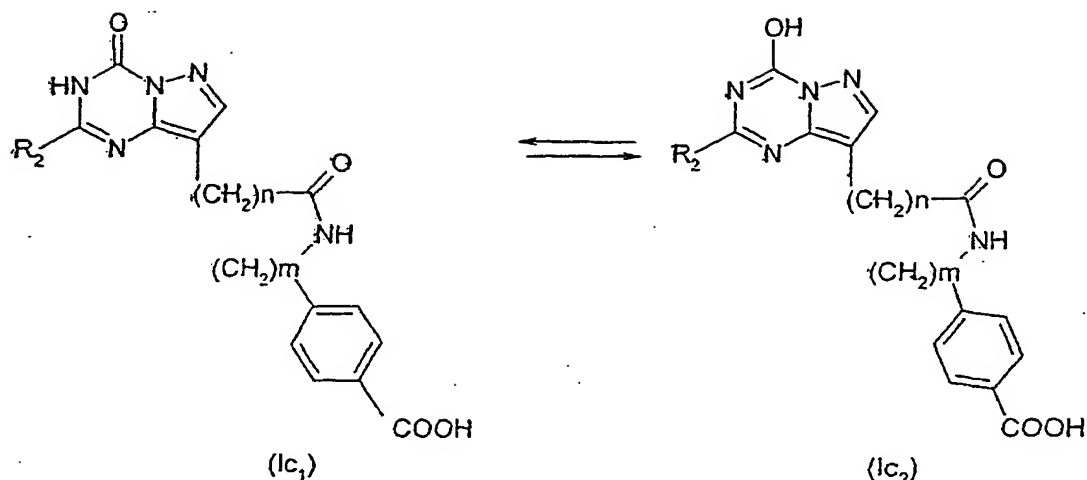
- when simultaneously, in formula (Ib), R_3 represents a heterocycle directly attached at the 8-position of the pyrazolotriazine ring, R_2 represents alkyl or hydrogen, and Y represents a group NR_xR_y , R_x being chosen from a hydrogen atom or an alkyl group, then R_y is different from H or from an alkyl, alkanoyl, carbamoyl or N-alkyl-carbamoyl group;
5
- when NR_xR_y , in formula (Ib), represents an NH_2 group or a group $NH(C_1-C_4)alkyl$, then R_4 is different from a hydrogen atom or a C_1-C_4 alkyl group;
10
- when simultaneously, in formula (Ib), Y represents $NHCH_3$, R_2 represents CH_3 and R_4 represents a hydrogen atom, then R_3 is different from benzyl, phenyl, naphthyl, (2-naphthyl)methyl, pentyl, benzoyl, propyne, penten-1-yl, 2-furyl, 2-thienyl, 2-chlorophenyl, 3-acetylphenyl, 3-nitrophenyl, 3-trifluoromethylphenyl, 2-benzo[b]furyl, 2-benzo-
15 [b]thienyl, 2-chlorobenzoyl, 2-methylaminobenzoyl, 4-methoxybenzoyl, 3-trifluoromethylbenzoyl, furfuryl, (3-furyl)methyl, (2-thienyl)methyl, 2-hydroxypropyl, iodo, nitro, acetylamino, benzoylamino and diethylaminocarbonyl;
20
- when simultaneously, in formula (Ib), Y represents $NHCH_3$, R_4 represents H and R_3 represents benzoyl or iodo, then R_2 is different from methyl, ethyl, n-propyl, n-butyl, thiomethyl, methoxymethyl, phenyl and 2-furyl;
25
- when simultaneously, in formula (Ib), Y represents $NHCH_3$, R_4 represents H and R_3 represents benzyl or 2-methoxybenzyl, then R_2 is different from methyl, n-propyl and trifluoromethyl;
30
- when simultaneously, in formula (Ib), Y represents a methylamino, benzylamino, pyrrolidinyl, dimethylamino or 1-piperazinyl group and R_2 represents methyl or n-propyl, then R_3 is different from iodo and benzoyl;
35

- when R_4 , in formula (Ib), is a 2-furyl group, then R_3 is different from a hydrogen atom or from a (C_1-C_4) alkyl group;
- when simultaneously, in formulae (Ia) and (Ib), R_1 is a hydrogen atom with R_2 chosen from CH_3 , C_2H_5 or C_6H_5 , R_3 is chosen from H , C_6H_5 , $(m)CH_3C_6H_4$, CN , $COOEt$, Cl , I or Br , and R_4 represents H , C_6H_5 , $(o)CH_3C_6H_4$ or $(p)CH_3OC_6H_4$, then Y is different from H , OH , CH_3 , C_2H_5 , C_6H_5 , $n-C_3H_7$, $iso-C_3H_7$, SH , SCH_3 , $NH(n-C_4H_9)$ or $N(C_2H_5)_2$ and X is different from O ;
- when simultaneously, in formula (Ib), R_1 represents H , R_3 represents Br or H , and R_2 is chosen from H , CH_3 or SCH_3 with R_4 being C_6H_5 or H , then Y is different from SCH_3 , $NH(n-Pr)$, $NH(n-Bu)$, $N(Et)_2$, piperidyl, OH , SH , $O(i-Pr)$, CH_3 , SEt , OCH_3 and $O(n-Pr)$;
- when simultaneously, in formula (Ib), R_2 represents CF_3 , CH_3OCH_2- , Ph , Et , $n-Pr$ or CH_3 , Y represents $NHCH_3$, $N(CH_3)_2$ or $N(CH_3)Ph$, and $R_4 = H$ or CH_3 , then R_3 is different from β -D-glycero-pentofuran-3'-ulos-1'-yl, 2'-deoxy- β -D-ribofuranosyl, 2'-deoxy- β -D-xylofuranosyl, 2'-deoxy- β -D-ribofuranosyl-3',5'-bis(dibenzyl phosphate), cyclic benzyl 2'-deoxy- β -D-xylofuranosyl-3',5'-phosphate, 2'-deoxy- β -D-ribofuranosyl-3',5'-bisphosphate and cyclic 2'-deoxy- β -D-xylofuranosyl-3',5'-phosphate, and with the proviso that the compound does not correspond to the following formulae:



4. A compound as claimed in any one of claims 1 to 3, characterized in that:
- 5 R₁ represents either a hydrogen atom or a (C₁-C₁₂)alkyl group,
- R₂ represents either a hydrogen or sulfur atom, or a (C₁-C₆)alkyl group, or a trifluoro(C₁-C₆)alkyl group, or an amino group, or a group SR_x where R_x is as defined
- 10 above,
- R₃ represents either a hydrogen atom, or a halogen atom, or a nitro, (C₁-C₆)alkyl, trifluoro(C₁-C₆)alkyl,

- acyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, (C₆-C₁₈)aryl,
(CH₂)_nCONH-(CH₂)_maryl, (CH₂)_nSO₂NH-(CH₂)_maryl or
(CH₂)_nCONH-CH(COOH)-(CH₂)_paryl group with n = 1 to 4,
m = 0 to 3 and p = 0 to 2, or a group NR'R'' or
5 NHCOR'R'', R' and R'', independently of one another,
being chosen from a hydrogen atom, (C₁-C₆)alkyl,
(C₃-C₆)cycloalkyl and (C₆-C₁₂)aryl groups, and aromatic
or nonaromatic (C₅-C₁₂)heterocycles containing 1 to 3
hetero atoms,
- 10 R₄ represents a hydrogen atom,
X represents an oxygen or sulfur atom, and
Y represents either a halogen atom, or a (C₁-C₆)alkyl,
(C₂-C₆)alkynyl, phenyl, OR_x, SR_x or NR_xR_y group in which
R_x and R_y are as defined above.
- 15 5. A compound as claimed in any one of claims 1 to 4,
characterized in that:
R₁ represents a hydrogen atom or a methyl group,
R₂ represents a hydrogen or sulfur atom, or a methyl,
20 propyl, trifluoromethyl, amino or thiomethyl group,
R₃ represents an iodine atom, or an amino, nitro, acyl-
amino, benzyl, 2-methoxybenzyl, furfuryl,
3-furylmethyl, 2-thienylmethyl, 3-thienylmethyl,
2-pyridylmethyl, 2-chlorobenzoyl -CH₂CH₂COOH,
25 CH₂CH₂COONa, C₆H₄COOH, C₆H₄COONa, C₆H₄COOC₂H₅, ethyl
benzoate, sodium benzoate, CH₂=CHCOOC₂H₅, propyn-1-yl,
(CH₂)₂CONH-C₆H₄COONa, (CH₂)CONH-(CH₂)₂-indole, (CH₂)₂CONH-
CH(COOH)(CH₂)indole, (CH₂)CONH-(CH₂)₂C₆H₄OH or (CH₂)₂CONH-
CH₂C₆H₄OH group,
- 30 X represents an oxygen atom, and
Y represents an OH, SH, N-methyl-N-phenylamino
(NPhCH₃), N-methyl-N-(4-acylamino)phenyl amino or
triazole group.
- 35 6. A compound as claimed in any one of claims 1 to 5,
characterized in that it corresponds to formulae (Ic₁)
and (Ic₂)



in which $n = 1$ to 4 , and $m = 0$ to 2 , preferably R_2 represents a hydrogen atom, $n = 2$ and $m = 0$, and also its prodrugs, its bioprecursors and its pharmaceutically acceptable base or acid addition salts.

7. A compound as claimed in claim 6, characterized in that R_2 represents a hydrogen atom, $n = 1$ to 2 and $m = 0$.

8. Sodium 4-[[1-(oxo)-3-(4-oxopyrazolo[1,5-a]-1,3,5-triazin-8-yl)propyl]amino]benzoate.

9. A compound as claimed in any one of claims 1 to 5, characterized in that Y represents a methylamino or cyclopropylamino group, R_2 represents an iodine or sulfur atom, or a methyl, propyl, cyclopropyl, perfluoroethyl, perfluoropropyl, trifluoromethyl, allyl, trifluoromethylvinyl, vinyl, 1-propynyl or ethynyl group, R_3 is chosen from an iodine atom, and a benzyl, 2-methoxybenzyl, 2-fluorobenzyl, 2-bromobenzoyl, furfuryl, 2-furylcarbonyl, 3-furylmethyl, 2-thienylmethyl, 3-thienylmethyl, 2-pyridylmethyl, 2-chlorobenzoyl, cyclopentyl or cyclohexyl group, and R_4 represents a hydrogen or fluorine atom.

10. A compound as claimed in claim 3, characterized in that X represents an oxygen atom, Y represents an OH or NH₂ group, R₁ represents a hydrogen atom or optionally an alkyl group having from 1 to 3 carbons, R₃ represents a hydrogen atom or a substituted benzyl group, and R₄ represents a hydrogen or fluorine atom.

11. A compound as claimed in any one of claims 1 to 10, characterized in that it is chosen from the group consisting of the following compounds:

8-Iodo-4-(*N*-methyl-*N*-phenylamino)pyrazolo[1,5-*a*]-1,3,5-triazine.

8-Iodo-4-[*N*-methyl-*N*-(4-nitrophenyl)amino]pyrazolo[1,5-*a*]-1,3,5-triazine.

8-Iodo-4-(triazol-4-yl)pyrazolo[1,5-*a*]-1,3,5-triazine.

8-Acetamido-2-methylpyrazolo[1,5-*a*]-1,3,5-triazin-4-one.

Methyl 4-[(hydroxy)[4-(*N*-methyl-*N*-phenylamino)pyrazolo[1,5-*a*]-1,3,5-triazin-8-yl]methyl]benzoate.

8-[(2-Chlorophenyl)(hydroxy)methyl]-4-(*N*-methyl-*N*-phenylamino)-2-*n*-propylpyrazolo[1,5-*a*]-1,3,5-triazine.

8-(2-Chlorophenyl)-4-(*N*-methyl-*N*-phenylamino)-2-*n*-propylpyrazolo[1,5-*a*]-1,3,5-triazine.

8-(2-Chlorophenyl)-4-(*N*-methylamino)-2-*n*-propylpyrazolo[1,5-*a*]-1,3,5-triazine.

Ethyl 3-[4-(*N*-methyl-*N*-phenylamino)pyrazolo[1,5-*a*]-1,3,5-triazin-8-yl]acrylate.

Ethyl 3-[4-(*N*-methyl-*N*-phenylamino)pyrazolo[1,5-*a*]-1,3,5-triazin-8-yl]propionate.

3-[4-(*N*-Methyl-*N*-phenylamino)pyrazolo[1,5-*a*]-1,3,5-triazin-8-yl]propionic acid.

Methyl 4-[[1-oxo-3-[4-(*N*-methyl-*N*-phenylamino)pyrazolo[1,5-*a*]-1,3,5-triazin-8-yl]propyl]amino]benzoate.

4-(Cyclopropylamino)-8-(2-fluorobenzoyl)-2-methylpyrazolo[1,5-*a*]-1,3,5-triazine.

Ethyl 4-(*N*-methyl-*N*-phenylamino)pyrazolo[1,5-*a*]-1,3,5-triazine-8-carboxylate.

tert-Butyl 3-[4-(*N*-methyl-*N*-phenylamino)pyrazolo-

- [1,5-a]-1,3,5-triazin-8-yl]acrylate.
tert-Butyl 3-[4-(N-methyl-N-phenylamino)pyrazolo-
[1,5-a]-1,3,5-triazin-8-yl]propionate
4-(N-Methyl-N-phenylamino)-8-phenylpyrazolo[1,5-a]-
5 1,3,5-triazine.
4-(N-Methyl-N-phenylamino)-8-(β -D-glycero-pentofuran-
3'-ulos-1'-yl)pyrazolo[1,5-a]-1,3,5-triazine.
8-[(3-Furyl)(hydroxy)methyl]-4-(N-methyl-N-phenyl-
amino)-2-n-propylpyrazolo[1,5-a]-1,3,5-triazine.
10 8-(3-Furylmethyl)-2-n-propyl-4-(N-methyl-N-phenyl-
amino)pyrazolo[1,5-a]-1,3,5-triazine.
2-Trifluoromethyl-8-(3-furylmethyl)-4-(cyclopropyl-
amino)pyrazolo[1,5-a]-1,3,5-triazine.
2-Thiomethyl-8-(3-furylmethyl)-4-(N-methylamino)-
15 pyrazolo[1,5-a]-1,3,5-triazine.
8-(3-Furylmethyl)-4-(N-methylamino)-2-n-propylpyrazolo-
[1,5-a]-1,3,5-triazine.
2-Trifluoromethyl-8-cyclopentyl-4-(N-methylamino)-
pyrazolo[1,5-a]-1,3,5-triazine.
20 2-Pentafluoroethyl-8-(2-methoxybenzyl)-4-(N-methyl-
amino)pyrazolo[1,5-a]-1,3,5-triazine.
4-(N-Cyclopropylamino)-2-trifluoromethyl-8-(2-methoxy-
benzyl)pyrazolo[1,5-a]-1,3,5-triazine.
4-(N-Cyclopropylamino)-8-(2-methoxybenzyl)-2-n-propyl-
25 pyrazolo[1,5-a]-1,3,5-triazine.
2-Iodo-8-(2-methoxybenzyl)-4-(N-methylamino)pyrazolo-
[1,5-a]-1,3,5-triazine.
2-Bromo-8-(2-methoxybenzyl)-4-(N-methylamino)pyrazolo-
[1,5-a]-1,3,5-triazine.
30 8-[(Hydroxy)(2-thienyl)methyl]-4-(N-methyl-N-phenyl-
amino)-2-n-propylpyrazolo[1,5-a]-1,3,5-triazine.
8-(2-Chlorobenzoyl)-2-trifluoromethyl-4-(N-methyl-
amino)pyrazolo[1,5-a]-1,3,5-triazine.
8-(2-Chlorobenzoyl)-2-pentafluoroethyl-4-(N-methyl-
35 amino)pyrazolo[1,5-a]-1,3,5-triazine.
8-(2-Chlorobenzoyl)-2-trifluoromethyl-4-(N-cyclopropyl-
amino)pyrazolo[1,5-a]-1,3,5-triazine.
4-(N-Methyl-N-phenylamino)-2-n-propyl-8-(2-thienyl-

- methyl)pyrazolo[1,5-a]-1,3,5-triazine.
4-(*N*-Methylamino)-2-*n*-propyl-8-[(2-thienyl)methyl]-
pyrazolo[1,5-a]-1,3,5-triazine.
4-(*N*-Methylamino)-2-trifluoromethyl-8-[(2-thienyl)-
5 methyl]pyrazolo[1,5-a]-1,3,5-triazine.
4-(*N*-Cyclopropylamino)-2-trifluoromethyl-8-[(2-
thienyl)methyl]pyrazolo[1,5-a]-1,3,5-triazine.
N-[2-(3,4-Dihydroxyphenyl)ethyl]-3-[4-(*N*-methyl-*N*-
phenylamino)pyrazolo[1,5-a]-1,3,5-triazin-8-yl]-
10 propionamide.
3-[4-(*N*-Methyl-*N*-phenylamino)pyrazolo[1,5-a]-1,3,5-
triazin-8-yl]-*N*-[3-(2-oxopyrrolidin-1-yl)propyl]-
propionamide.
N-[2-Hydroxy-2-(3,4-dihydroxyphenyl)ethyl]-3-[4-(*N*-
15 methyl-*N*-phenylamino)pyrazolo[1,5-a]-1,3,5-triazin-8-
yl]propionamide.
3-(4-Oxopyrazolo[1,5-a]-1,3,5-triazin-8-yl)propionic
acid.
Ethyl 3-[4-oxopyrazolo[1,5-a]-1,3,5-triazin-8-yl]-
20 acrylate.
Sodium 4-[(hydroxy)[4-oxopyrazolo[1,5-a]-1,3,5-triazin-
8-yl)methyl]benzoate.
Sodium 4-[1-(oxo)-4-3-(oxopyrazolo[1,5-a]-1,3,5-
triazin-8-yl)propyl]amino]benzoate.
25 Sodium 4-[2-(4-oxopyrazolo[1,5-a]-1,3,5-triazin-8-yl)-
ethylsulfonylamino]benzoate.
Sodium 4-[1-oxo-3-(2-amino-4-oxopyrazolo[1,5-a]-1,3,5-
triazin-8-yl)propylamino]benzoate.
Sodium 4-[1-oxo-3-(2-*n*-propyl-4-oxopyrazolo[1,5-a]-
30 1,3,5-triazin-8-yl)propylamino]benzoate.
Sodium 4-[1-oxo-3-(2-trifluoromethyl-4-oxopyrazolo-
[1,5-a]-1,3,5-triazin-8-yl)propylamino]benzoate.
N-[2-(Indol-3-yl)ethyl]-3-(4-oxopyrazolo[1,5-a]-1,3,5-
triazin-8-yl)propanamide.
35 *N*-[2-(Indol-3-yl)ethyl]-3-(2-amino-4-oxopyrazolo-
[1,5-a]-1,3,5-triazin-8-yl)propanamide.
N-[1-(Carboxyl)-2-(indol-3-yl)ethyl]-3-(4-oxopyrazolo-
[1,5-a]-1,3,5-triazin-8-yl)propanamide.

- N*-[2-(4-Hydroxyphenyl)ethyl]-3-(4-oxopyrazolo[1,5-*a*]-1,3,5-triazin-8-yl)propanamide.
- N*-[2-(4-Hydroxyphenyl)ethyl]-3-(2-amino-4-oxopyrazolo[1,5-*a*]-1,3,5-triazin-8-yl)propanamide.
- 5 *N*-[2-(4-Hydroxyphenyl)ethyl]-3-(2-trifluoromethyl-4-oxopyrazolo[1,5-*a*]-1,3,5-triazin-8-yl)propanamide.
- N*-[1-(Carboxyl)-2-(4-hydroxyphenyl)ethyl]-3-(4-oxopyrazolo[1,5-*a*]-1,3,5-triazin-8-yl)propanamide.
- 4-(*N*-Methyl-*N*-phenylamino)pyrazolo[1,5-*a*]-1,3,5-
- 10 triazine.
- 2-(4-Methylbenzyl)-8-(2-oxohept-3-yl)pyrazolo[1,5-*a*]-1,3,5-triazin-4-one.
- 8-(2-Hydroxy-6-phenylhex-3-yl)-2-(3,4-dimethoxybenzyl)pyrazolo[1,5-*a*]-1,3,5-triazin-4-one.
- 15 Erythro-8-(2-hydroxy-3-nonyl)pyrazolo[1,5-*a*]-1,3,5-triazin-4-one.
- Erythro-4-amino-8-(2-hydroxy-3-nonyl)pyrazolo[1,5-*a*]-1,3,5-triazine.
- Sodium 4-[[3-(1-methyl-4-oxopyrazolo[1,5-*a*]-1,3,5-
- 20 triazin-8-yl)-1-(oxo)propyl]amino]benzoate.
- 8-Benzoyl-2-cyclopropylpyrazolo[1,5-*a*]-1,3,5-triazin-4-one.
- N*-[2-(3,4-Dihydroxyphenyl)ethyl]-3-(4-oxopyrazolo[1,5-*a*]-1,3,5-triazin-8-yl)propionamide.
- 25 3-[4-Oxopyrazolo[1,5-*a*]-1,3,5-triazin-8-yl]-*N*-[3-(2-oxopyrrolidin-1-yl)propyl]propionamide.
- N*-[2-Hydroxy-2-(3,4-dihydroxyphenyl)ethyl]-3-[4-oxopyrazolo[1,5-*a*]-1,3,5-triazin-8-yl]propionamide.
- 8-(2'-Deoxy- β -D-ribofuranosyl)-4-(*N*-methyl-*N*-phenyl-
- 30 amino)pyrazolo[1,5-*a*]-1,3,5-triazine.
- 8-(2'-Deoxy- β -D-ribofuranosyl)-4-[*N*-methyl-*N*-(4-nitrophenylamino)]pyrazolo[1,5-*a*]-1,3,5-triazine.
- 8-(2'-Deoxy- β -D-xylofuranosyl)-4-(*N*-methyl-*N*-phenyl-
- 35 amino)pyrazolo[1,5-*a*]-1,3,5-triazine.
- 8-(2'-Deoxy- β -D-xylofuranosyl)-4-[*N*-methyl-*N*-(4-nitrophenylamino)]pyrazolo[1,5-*a*]-1,3,5-triazine.
- 4-Amino-8-(2'-deoxy- β -D-ribofuranosyl)pyrazolo[1,5-*a*]-1,3,5-triazine.

- 8-(2'-Deoxy- β -D-ribofuranosyl)pyrazolo[1,5-a]-1,3,5-triazin-4-one.
4-Amino-8-(2'-deoxy- β -D-xylofuranosyl)pyrazolo[1,5-a]-1,3,5-triazine.
- 5 8-(2'-Deoxy- β -D-xylofuranosyl)pyrazolo[1,5-a]-1,3,5-triazin-4-one.
4-Amino-2-fluoro-8-[*trans*-2,*trans*-3-dihydroxy-4-(hydroxymethyl)cyclopent-4-enyl]pyrazolo[1,5-a]-1,3,5-triazine.
- 10 4-Amino-8-[*trans*-2,*trans*-3-dihydroxy-4-(hydroxymethyl)-cyclopent-4-enyl]pyrazolo[1,5-a]-1,3,5-triazine.
2-Fluoro-8-[*trans*-2,*trans*-3-dihydroxy-4-(hydroxymethyl)cyclopent-4-enyl]pyrazolo[1,5-a]-1,3,5-triazin-4-one.
- 15 8-[*trans*-2,*trans*-3-dihydroxy-4-(hydroxymethyl)-cyclopent-4-enyl]pyrazolo[1,5-a]-1,3,5-triazin-4-one.
(1*S*,4*R*)-2-Amino-4-(cyclopropylamino)-8-[4-(hydroxymethyl)cyclopent-2-en-1-yl]pyrazolo[1,5-a]-1,3,5-triazine.
- 20 *cis*-2-Amino-4-(cyclopropylamino)-8-[4-(hydroxymethyl)-cyclopent-2-en-1-yl]pyrazolo[1,5-a]-1,3,5-triazine.
4-Amino-7-chloro-8-(β -D-ribofuranosyl)pyrazolo[1,5-a]-1,3,5-triazine-3',5'-cyclophosphate.
bis-(2,2,2-Trifluoroethyl [2-[2-amino-4-(4-methoxyphenylthio)pyrazolo[1,5-a]-1,3,5-triazin-8-yl]ethoxy]-methylphosphonate.
- 25 4-Amino-8-(3'-deoxy- β -D-ribofuranosyl)pyrazolo[1,5-a]-1,3,5-triazine.
8-(3'-Deoxy- β -D-ribofuranosyl)pyrazolo[1,5-a]-1,3,5-triazin-4-one.
- 30 2-Amino-8-(3'-deoxy- β -D-ribofuranosyl)pyrazolo[1,5-a]-1,3,5-triazin-4-one.
4-Amino-2-chloro-8-(2'-deoxy- β -D-ribofuranosyl)-pyrazolo[1,5-a]-1,3,5-triazine.
- 35 *cis*-2-Amino-4-(cyclopropylamino)-8-[2-(hydroxymethyl)-1,3-dioxolan-4-yl]pyrazolo[1,5-a]-1,3,5-triazine.
4-Amino-8-(2',3'-dideoxy-2'-fluoro- β -D-ribofuranosyl)-pyrazolo[1,5-a]-1,3,5-triazine.

- 4-Amino-8-(2',3'-dideoxy-2'-fluoroarabinosyl)pyrazolo-
[1,5-a]-1,3,5-triazine.
- 2-Amino-8-[4-acetyloxy-3-(acetyloxymethyl)butyl]-
pyrazolo[1,5-a]-1,3,5-triazine.
- 5 4-Amino-2-chloro-8-(2'-deoxy-2'-fluoro- β -D-ribo-
furanosyl)pyrazolo[1,5-a]-1,3,5-triazine.
- 4-Amino-8-(2'-deoxy-2'-fluoro- β -D-ribofuranosyl)-
pyrazolo[1,5-a]-1,3,5-triazine.
- 8-(2'-Deoxy-2'-fluoro- β -D-ribofuranosyl)pyrazolo-
10 [1,5-a]-1,3,5-triazin-4-one.
- S-[[4-Amino-8-(5'-deoxy- β -D-ribofuranosyl)pyrazolo-
[1,5-a]-1,3,5-triazine]-5'-yl]methionine (bioisostere
of S-adenosylmethionine).
- 2-Amino-4-[(4-bromo-2-thienyl)methoxy]pyrazolo[1,5-a]-
15 1,3,5-triazine.
- (R)-4-Benzylamino-2-[1-(hydroxymethyl)propylamino]-8-
isopropylpyrazolo[1,5-a]-1,3,5-triazine.
- (S)-4-Benzylamino-2-[1-(hydroxymethyl)propylamino]-8-
isopropylpyrazolo[1,5-a]-1,3,5-triazine.
- 20 2'-(Butyryl)-4-(N-butyrylamino)-8-(β -D-ribofuranosyl)-
pyrazolo[1,5-a]-1,3,5-triazine-3',5'-cyclophosphate.
- cis-2,4-Diamino-8-[2-(hydroxymethyl)-1,3-dioxolan-4-
yl]pyrazolo[1,5-a]-1,3,5-triazine.
- cis-2-Amino-8-[2-(hydroxymethyl)-1,3-dioxolan-4-yl]-
25 pyrazolo[1,5-a]-1,3,5-triazin-4-one.
- cis-8-[2-(Hydroxymethyl)-1,3-dioxolan-4-yl]pyrazolo-
[1,5-a]-1,3,5-triazin-4-one.
- cis-4-Amino-8-[2-(hydroxymethyl)-1,3-dioxolan-4-yl]-
pyrazolo[1,5-a]-1,3,5-triazine.
- 30 (1'S,2'R)-2-Amino-8-[[1',2'-bis(hydroxymethyl)cyclo-
prop-1'-yl]methyl]pyrazolo[1,5-a]-1,3,5-triazin-4-one.
- (1'S,2'R)-8-[[1',2'-bis(Hydroxymethyl)cycloprop-1'-yl]-
methyl]pyrazolo[1,5-a]-1,3,5-triazin-4-one.
- (1'S,2'R)-4-Amino-8-[[1',2'-bis(hydroxymethyl)cyclo-
35 prop-1'-yl]methyl]pyrazolo[1,5-a]-1,3,5-triazine.
- 2-Amino-8-[(2-hydroxyethoxy)methyl]pyrazolo[1,5-a]-
1,3,5-triazin-4-one.
- 8-[(2-Hydroxyethoxy)methyl]pyrazolo[1,5-a]-1,3,5-

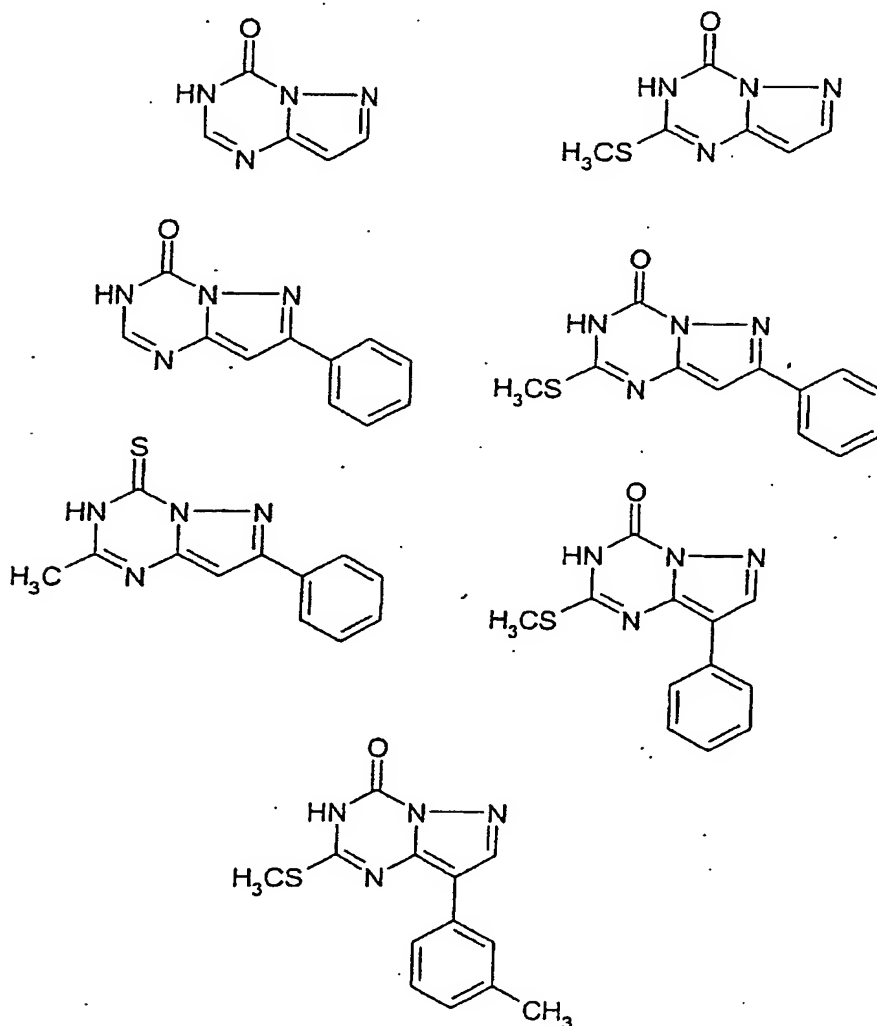
- triazin-4-one.
4-Amino-8-[(2-hydroxyethoxy)methyl]pyrazolo[1,5-a]-
1,3,5-triazine.
2-Amino-8-[4-hydroxy-3-(hydroxymethyl)butyl]pyrazolo-
5 [1,5-a]-1,3,5-triazin-4-one.
4-Amino-8-[4-hydroxy-3-(hydroxymethyl)butyl]pyrazolo-
[1,5-a]-1,3,5-triazine.
8-[4-Hydroxy-3-(hydroxymethyl)butyl]pyrazolo[1,5-a]-
1,3,5-triazin-4-one.
10 2-Amino-8-[2-hydroxy-1-(hydroxymethyl)ethoxymethyl]-
pyrazolo[1,5-a]-1,3,5-triazin-4-one.
8-[2-Hydroxy-1-(hydroxymethyl)ethoxymethyl]pyrazolo-
[1,5-a]-1,3,5-triazin-4-one.
4-Amino-8-[2-hydroxy-1-(hydroxymethyl)ethoxymethyl]-
15 pyrazolo[1,5-a]-1,3,5-triazine.
2-[(2-Amino-4-oxopyrazolo[1,5-a]-1,3,5-triazin-8-
yl)methoxy]ethyl valinate.
8-(2',3'-Dideoxy- β -D-ribofuranosyl)pyrazolo[1,5-a]-
1,3,5-triazin-4-one.
20 8-(2',3'-Dideoxy-2',2'-difluoro- β -D-ribofuranosyl)-
pyrazolo[1,5-a]-1,3,5-triazin-4-one.
8-(2'-Deoxy- β -D-ribofuranosyl)pyrazolo[1,5-a]-1,3,5-
triazin-4-one.
bis(Pivaloyloxymethyl) [2-(4-aminopyrazolo[1,5-a]-
25 1,3,5-triazin-8-yl)ethoxy)methylphosphonate.
Sodium [2-(4-aminopyrazolo[1,5-a]-1,3,5-triazin-8-yl)-
ethoxy)methylphosphonate.
4-Amino-8-[2-[[bis(pivaloyloxymethyl)phosphonyl]-
methoxy]ethyl]pyrazolo[1,5-a]-1,3,5-triazine.
30 cis-8-[2-(Hydroxymethyl)-1,3-oxathiolan-5-yl]pyrazolo-
[1,5-a]-1,3,5-triazin-4-one.
cis-8-[2-(Hydroxymethyl)-1,3-oxathiolan-5-yl]-2-oxo-
pyrazolo[1,5-a]-1,3,5-triazin-4-one.
cis-8-[2-(Hydroxymethyl)-1,3-oxathiolan-5-yl]-2-thioxo-
35 pyrazolo[1,5-a]-1,3,5-triazin-4-one.
cis-2-Amino-8-[2-(hydroxymethyl)-1,3-oxathiolan-5-yl]-
pyrazolo[1,5-a]-1,3,5-triazin-4-one.
cis-4-Amino-8-[2-(hydroxymethyl)-1,3-oxathiolan-5-yl]-

pyrazolo[1,5-a]-1,3,5-triazine.

8-[[3R,4R)-3-Hydroxy-4-(hydroxymethyl)pyrrolidin-1-yl]-methyl]pyrazolo[1,5-a]-1,3,5-triazin-4-one.

4-Amino-8-[[(3R,4R)-3-hydroxy-4-(hydroxymethyl)-
5 pyrrolidin-1-yl]methyl]pyrazolo[1,5-a]-1,3,5-triazine.

12. The use of the compounds as claimed in any one of claims 1 to 11, including the compounds corresponding to the following formulae:



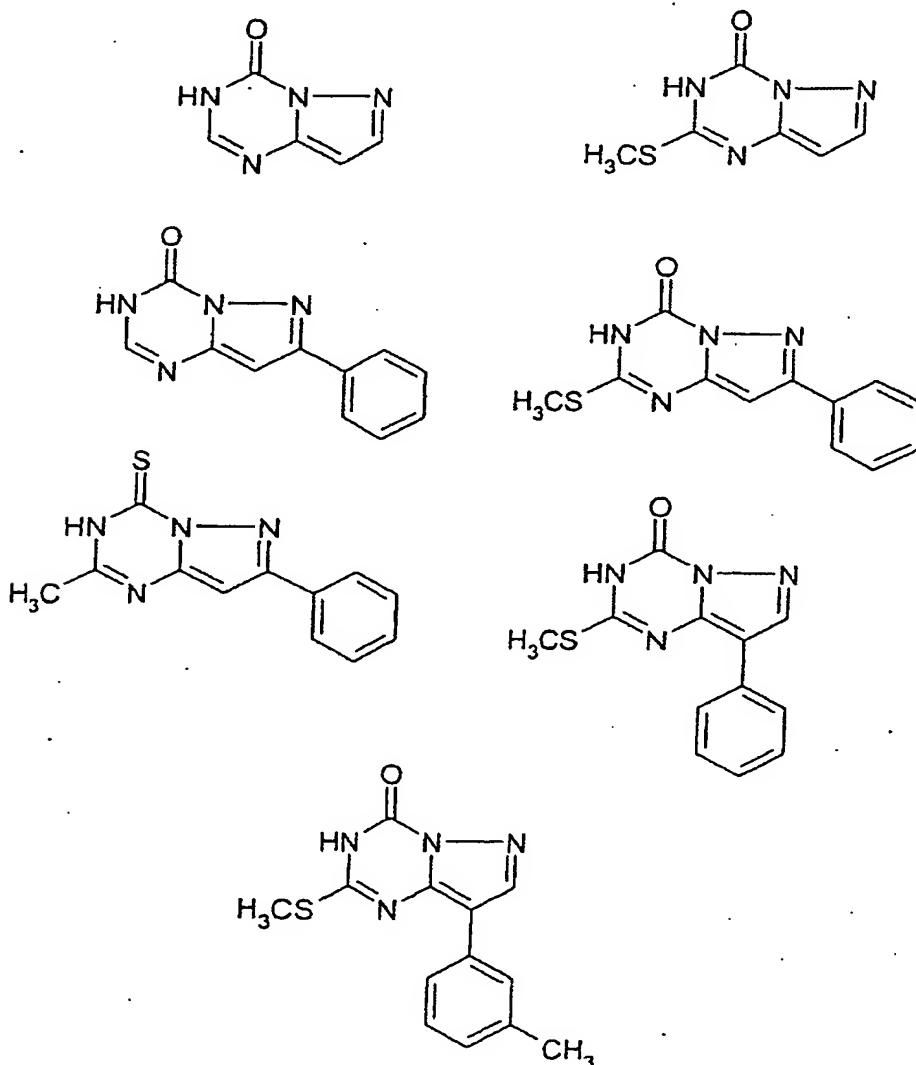
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as a medicinal product intended to treat or prevent pathologies involving neuronal degeneration, in particular aging, senility, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, multiple sclerosis, Huntington's disease, Down's syndrome, cerebral strokes, peripheral neuropathies,

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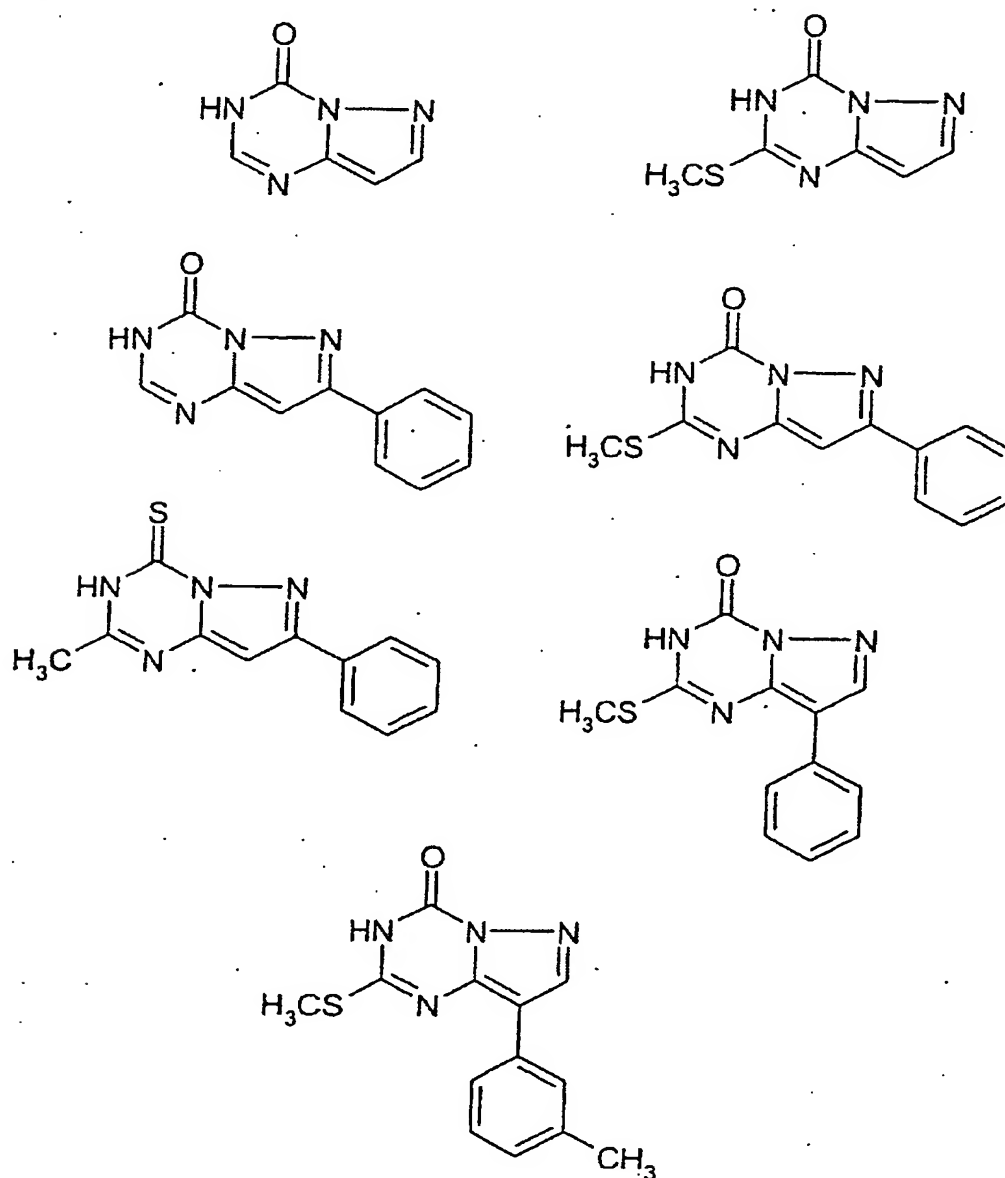
retinopathies (in particular pigmentary retinitis),
prion diseases (in particular spongiform
encephalopathies of the Creutzfeldt-Jakob disease
type), traumas (accidents to the vertebral column,
5 compression of the optic nerve subsequent to a
glaucoma, etc.), or else neuronal disorders caused by
the action of chemical products and nerve lesions,
comprising the administration to this mammal of an
effective amount of a compound as claimed in any one of
10 claims 1 to 11.

13. The use of a compound as claimed in any one of
claims 1 to 11, including the compounds corresponding
to the following formulae:



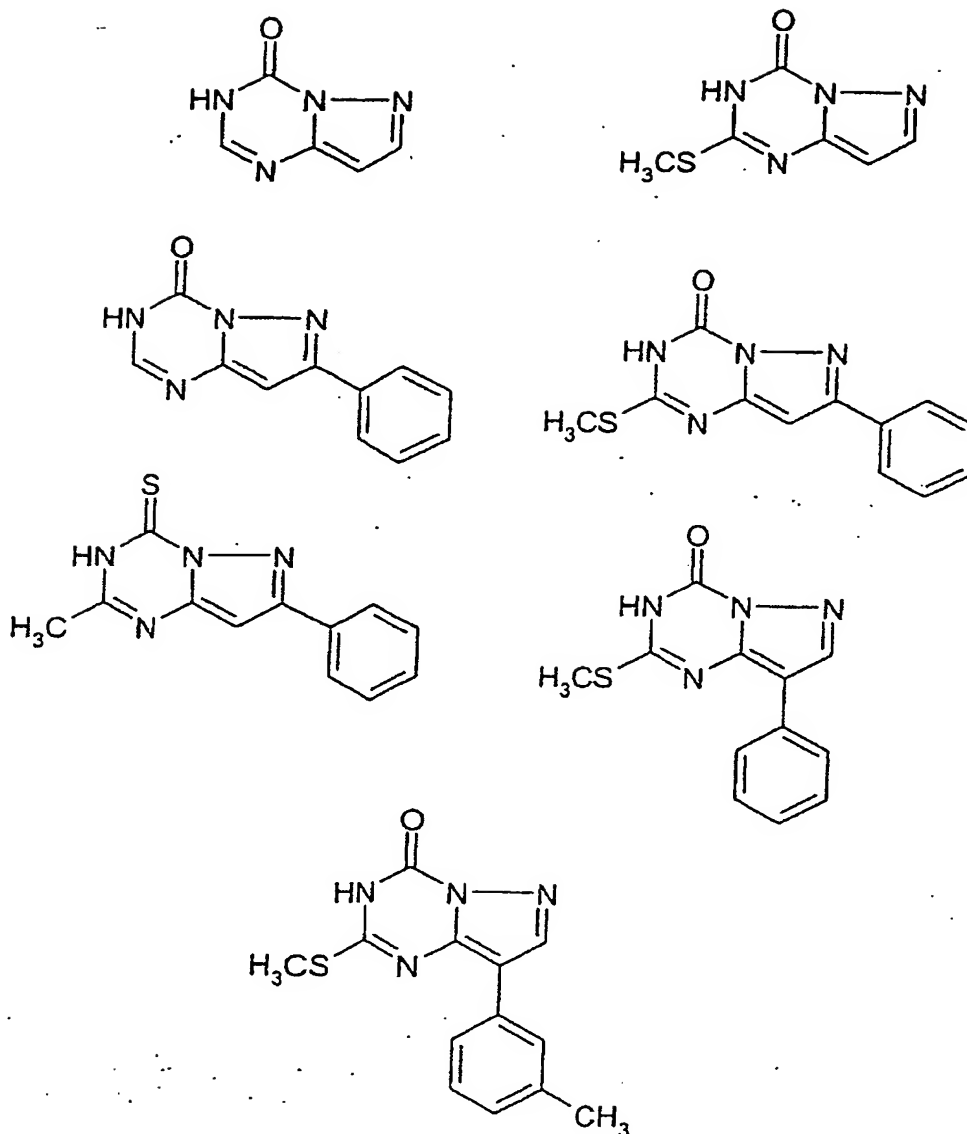
for preparing a medicinal product intended to increase intracellular levels of cGMP through inhibition of a phosphodiesterase or of heme oxygenase, for treating or preventing, in a mammal, central or peripheral diseases, comprising the administration to this mammal of an effective amount of a compound as claimed in any one of claims 1 to 11.

14. The use of a compound as claimed in any one of claims 1 to 11, including the compounds corresponding to the following formulae:



for preparing a medicinal product intended to inhibit a phosphodiesterase type 2 or 4, for treating or preventing, in a mammal, central or peripheral diseases chosen from inflammatory diseases, chronic obstructive
5 bronchopathies, rhinitis, dementia, acute respiratory distress syndrome, allergies, dermatitis, psoriasis, rheumatoid arthritis, infections (in particular viral infections), autoimmune diseases, multiple sclerosis (in particular multiple sclerosis), dyskinesias,
10 glomerulonephritis, osteoarthritis, cancer, septic shock, AIDS, Crohn's disease, osteoporosis, rheumatoid arthritis, obesity, depression, anxiety, schizophrenia, bipolar disorder, attention deficits, fibromyalgia, Parkinson's disease and Alzheimer's disease, diabetes,
15 amyotrophic sclerosis, multiple sclerosis, Lewy body dementias, conditions with spasms such as epilepsy, fibromyalgia, central nervous system pathologies associated with senescence, memory disorders, and other psychiatric disorders, comprising the administration to
20 this mammal of an effective amount of a compound as claimed in any one of claims 1 to 11.

15. The use of the compounds as claimed in any one of claims 1 to 8, including the compounds corresponding to
25 the following formulae:



as a medicinal product, in particular as antimicrobial, antiviral or anticancer medicinal products, or else medicinal products having cardiovascular effects.

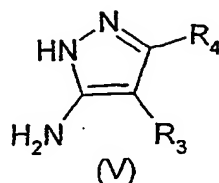
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16. A pharmaceutical composition comprising at least one compound as claimed in any one of claims 1 to 11, combined with a pharmaceutically acceptable vehicle or excipient.

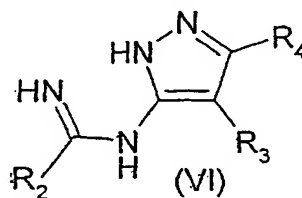
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17. A method for preparing a compound of formulae (Ia) or (Ib) as claimed in claim 3, in which $R_1=H$, characterized in that it comprises the following steps:

a) reaction of a compound of general formula (V)

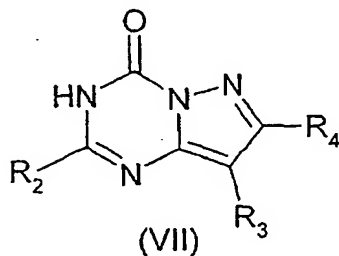


in which R_3 and R_4 are as defined in claim 3, with a compound a group of formula $R_2C(GP)=NH$, in which R_2 is
 5 as defined in claim 3 and GP represents a leaving group, so as to obtain a compound of formula (VI)

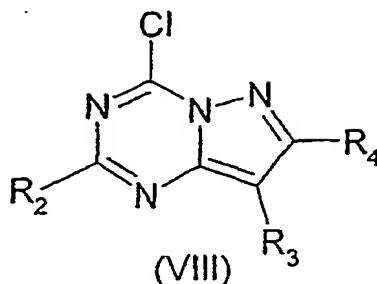


b) reaction of the compound of formula (VI) with a
 10 dielectrophile so as to obtain a compound of formula (Ia) or (Ib).

18. The method as claimed in claim 17, characterized
 in that, during step a), the compound of formula (V) is
 reacted with an imidate of formula $R_2(OMe)=NH.HCl$ and,
 15 during step b), the compound obtained in a) is reacted
 with an ethyl carbonate so as to obtain a compound of
 formula (VII)



which can optionally be reacted with phosphorus oxy-
 20 chloride and a tertiary amine so as to obtain a
 compound of formula (VIII)



which can, if desired, be reacted with an amine of formula HNR_xR_y so as to obtain a compound of formula (Ib) in which $\text{Y}=\text{NR}_x\text{R}_y$.

5

19. The method as claimed in claim 18, characterized in that, when Y represents an *N*-methyl-*N*-phenylamino group, then the compound (Ib) is treated with a hydroxide so as to obtain a compound of formula (Ib) in which $\text{Y}=\text{OH}$.

10

20. The use of the following compounds:

- 8-(1-hydroxypropyl)-2-methyl-4-(*N*-methyl-*N*-phenylamino)pyrazolo[1,5-*a*]-1,3,5-triazine, ethyl 2-methyl-4-(*N*-methyl-*N*-phenylamino)pyrazolo[1,5-*a*]-1,3,5-triazine-6-carboxylate, 2-methyl-4-(*N*-methyl-*N*-phenylamino)-8-phenylpyrazolo[1,5-*a*]-1,3,5-triazine, 2-methyl-4-(*N*-methylamino)-8-(prop-1-ynyl)pyrazolo[1,5-*a*]-1,3,5-triazine, 2-methyl-4-(*N*-methyl-*N*-phenylamino)-8-(β -D-glycero-pentofuran-3'-ulos-1'-yl)pyrazolo[1,5-*a*]-1,3,5-triazine, 2-methyl-4-(methylamino)pyrazolo[1,5-*a*]-1,3,5-triazine, 2-methyl-4-[4-(*N,N*-dimethylamino-phenyl)]pyrazolo[1,5-*a*]-1,3,5-triazine, pyrazolo[1,5-*a*]-1,3,5-triazin-4-one, 2-methylpyrazolo[1,5-*a*]-1,3,5-triazin-4-one, 2-thioxo-1,2,3,4-tetrahydropyrazolo[1,5-*a*]-1,3,5-triazin-4-one, 2-thiomethylpyrazolo[1,5-*a*]-1,3,5-triazin-4-one, 2-methyl-4-(*N*-methyl-*N*-phenylamino)pyrazolo[1,5-*a*]-1,3,5-triazine, 2-methyl-4-[*N*-methyl-*N*-(4-nitrophenyl)amino]-8-nitropyrazolo[1,5-*a*]-1,3,5-triazine, 8-amino-4-[*N*-(4-amino-phenyl)-*N*-methylamino]-2-methylpyrazolo[1,5-*a*]-1,3,5-triazine, 8-acetamido-4-[*N*-(4-acetamidophenyl)-*N*-

30

methyldamino]-2-methylpyrazolo[1,5-a]-1,3,5-triazine,
8-iodo-2-methyl-4-(*N*-methyl-*N*-phenylamino)pyrazolo-
[1,5-a]-1,3,5-triazine, 8-[(hydroxy)(phenyl)methyl]-2-
methyl-4-(*N*-methyl-*N*-phenylamino)pyrazolo[1,5-a]-1,3,5-
5 triazine, 8-benzyl-2-methyl-4-(*N*-methyl-*N*-phenylamino)-
pyrazolo[1,5-a]-1,3,5-triazine, 8-benzoyl-2-methyl-4-
(*N*-methyl-*N*-phenylamino)pyrazolo[1,5-a]-1,3,5-triazine,
N,N-diethyl-2-methyl-4-(*N*-methyl-*N*-phenylamino)-
pyrazolo[1,5-a]-1,3,5-triazine-6-carboxamide, 8-benzyl-
10 2-methylpyrazolo[1,5-a]-1,3,5-triazin-4-one and
8-benzoyl-2-methylpyrazolo[1,5-a]-1,3,5-triazin-4-one,
for preparing a medicinal product intended to increase
the secretion of one or more neurotrophic factors for
treating or preventing pathologies involving neuronal
15 degeneration.